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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,592

08/16/2007

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

09/23/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/591,592	<b>Applicant(s)</b> IYANAGI, SATOSHI	
	<b>Examiner</b> Geoffrey L. Knable	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/5/06, 4/30/08</u> . | 6) <input type="checkbox"/> Other: ____.  |

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1. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the last two lines are indefinite and confusing. First, no antecedent has been established for "the unit thickness", it not being clear whether this is a thickness of any particular drum part. Also, it is not clear what is meant by "an mutually identical or different integral multiple." What is "identical" to what and what is "different" from what.

In claim 4, lines 3-4, no antecedent has been established for "the guide support portions", "the base column" or "the engagement portion".

In claim 7, lines 2-3, no antecedent has been established for "the tire building drum".

In claim 7, lines 3-4, it is not clear what is "according to claim 1", it not being clear if all the requirements of claim 1 are required in claim 7. This is especially indefinite and confusing given the requirement in lines 4-5 that the number of distance pieces includes "zero and one" insofar as claim 1 requires "several distance pieces". This contradiction raises significant confusion in assessing the scope of the claim.

In claim 7, line 6, defining that the total thickness of the distance pieces "is a given value for every size" and the end pieces are commonly used for all sizes is indefinite and confusing. If the total thickness of the distance pieces is the (same) "given value" for "all sizes" and the end pieces are all the same, then it is not seen how this could vary the width.

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The scope of claim 8 is entirely indefinite and confusing as it is not clear which if any of the claim 7 and/or claim 1 requirements are positively required to practice this method.

Likewise, the scope of claim 9 is indefinite and confusing as it is not clear which if any of the claim 7 and/or claim 1 requirements are positively required to practice this method. Note for example that "manufacturing a tire built with the tire building system according to claim 7" could be read as simply further defining the tire, not a specific requirement on what apparatus is used to build the tire and not specifically requiring each and every apparatus feature of claims 1/7. .

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 5 and 7-10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mallory et al. (US 3,776,802).

As to claim 1, Mallory et al. discloses a tire building drum, comprising bead lock means (80) for holding a pair of bead cores and a circular drum core (4) expansively

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supporting a center portion of a carcass band to define an internal shape of a green tire with an outer contour, the drum core consisting of several rigid segments (8/10) which are radially expandable/contractible and which are circumferentially adjacent to each other to form said outer contour, wherein, as viewed in a cross sectional plane including a central axis of the drum core, said outer contour has a flat contour portion parallel to the central axis in a widthwise central region. As to the requirement that "each of the rigid segments has several distance pieces forming at least a part of said flat contour portion and end pieces forming portions of the outer contour widthwise outside of the portion formed by the distance pieces, the distance pieces and the end pieces are aligned in the width direction of the drum core, and wherein said distance pieces are disposed such that their thickness direction is directed to the width direction of drum core and are detachably configured, and the thickness of each of the distance pieces is an mutually identical or different integral multiple (including 1) of the unit thickness", Mallory et al. suggest that "the width of the deck segments 8 may be predetermined by the addition or subtraction of supporting members 10 preferably at the ends of the drum" (col. 3, lines 26-28). Mallory et al. therefore teaches that individual blades 10 can be removed and thus are "detachably configured", it being submitted that centrally disposed blades read on the claimed distance pieces while blades at the drum ends read on the claimed end pieces. Since Mallory et al. suggests that the ends of the drum are where the blades are only "preferably" added/subtracted, it would have been understood or certainly obvious that blades other than at the drum ends are or can be removable to effect desired with adjustments. A tire building drum as required by claim

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1 is therefore anticipated or obvious from Mallory et al. As to claim 3, the parts "10" form comb plates. As to claim 5, the drum is usable to build any tire. As to claim 7, the drum can be used to build different sizes, especially given the disclosed width adjustment, and the end pieces would be common for all sizes, claim 7 not clearly requiring anything more. As to claim 8, given the suggestion for width adjustment governed by the number of plates, the total number of distance pieces would control the width and would be suitably selected. As to claim 9, the beads are locked (fig. 7), the center is radially expanded while approaching the bead cores 9 (figs. 8-9), the carcass is turned around the beads (fig. 10) and the tread is applied (fig. 11). As to claim 10, as already noted, Mallory et al. suggests adjustment of the width of the drum by adding/subtracting plates (10).

5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallory et al. (US 3,776,802) as applied above, and further in view of Bell (US 4,001,070).

As to claims 2 and 4, Mallory et al. provides a supporting column for the drum segments but does not detail the attachment of the plates to the drum. Bell is directed to a similar drum configuration to Mallory et al. (compare the figures) and teaches an axial sliding engagement of the drum pieces with the support member using a central stopper (61 in fig. 7 - note also col. 5, lines 19+) and end piece fixing means (69 - note also col. 6, lines 36-39). To adopt a central positioning stopper and end piece fixing means to slidably secure the plates to the drum of Mallory et al. to allow for width

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adjustment thereof would therefore have been obvious and lead to only the expected and predictable results.

6. Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallory et al. (US 3,776,802) as applied above, and further in view of Caretta et al. (US 2003/0170336).

Affixing appropriate identification of a drum configuration for tracking and process/quality control purposes would have been understood as typical and obvious in this art - Caretta et al. is exemplary of use of any type of identification for tire building drums (e.g. paragraph [0119]). Although Caretta et al. only specifically mentions a bar code, RFID tags are taken to be an extremely well known and obvious alternative to bar codes with well known enhanced functionality and would provide only the expected and predictable results.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bertrand et al. (US 3,745,085), Byerley (US 6,004,250), Fulton (US 3,346,434), Kumagai (US 4,292,112) and Rost (US 4,138,307) are other examples of width adjustable tire building drums including central and end segments but are at present no more relevant than the applied prior art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/  
Primary Examiner, Art Unit 1791

G. Knable  
September 17, 2010